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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: ) Before the Examiner  
Markus Thurneysen ) Donald W. Underwood  
Reymond Clavel )  
Serial No. 10/648,730 ) Group Art Unit: 3652  
Filed: August 22, 2003 ) Attorney Docket: WIMA 2  
KINEMATIC DEVICE FOR SUPPORT )  
AND PROGRAMMABLE )  
DISPLACEMENT OF A TERMINAL )  
ELEMENT IN A MACHINE OR AN )  
INSTRUMENT ) December 29, 2008

**REPLY BRIEF (37 C.F.R. §41.41)**

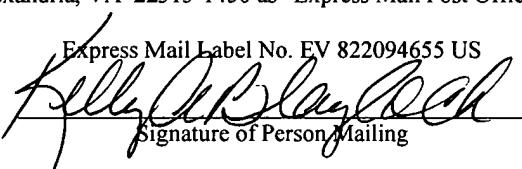
Mail Stop Appeal Briefs-Patent  
Commissioner for Patents  
P.O. Box 1450  
Arlington, VA 22313-1450

Sir:

This Reply Brief is in furtherance of the Notice of Appeal filed in this case on June 3, 2008, and received by the US Patent and Trademark Office on June 6, 2008.

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Signature of Person Mailing

Kelly Blaylock

Printed Name of Person Mailing

December 29, 2008

Date

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## **TABLE OF AUTHORITIES**

None.

## **STATEMENT OF ADDITIONAL FACTS**

None.

## REPLY ARGUMENT

The Examiner's Answer has been reviewed and is respectfully traversed by the Applicant.

As a matter of fact, the Examiner's Answer contains two material errors:

- A) The Examiner refers to Wiegand's Fig. 11, again, and based on an erroneous interpretation of Wiegand's Fig. 11, the Examiner makes assertions that do not correspond to what is actually disclosed by Wiegand. Some of the Examiner's assertions are indeed technically impossible.
- B) The Examiner does not take into consideration certain features clearly recited in claim 18 of the present application, and therefore he extends arbitrarily the actual scope of claim 18.

### The Examiner's Error A

On pages 3 and 4 of his Answer, the Examiner constructs an interpretation of Wiegand's Fig. 11 to demonstrate that claim 18 of the present application is anticipated by the Examiner's constructed interpretation of Fig. 11. The Examiner considers carriage 6a of Wiegand to be a part of an auxiliary structure. According to the Examiner, the auxiliary structure of Wiegand would comprise a pivoting bar in form of the pivoting bar 4a and a transmission structure with the upper end joint of bar 4a and the platform 1. According to the Examiner's interpretation, displacing the carriage 4a would cause a pivoting movement of platform 1 about a virtual axis that would be parallel to the axes defined on the platform by upper joints of bars 4c, 4e, 4d and 4f, respectively; all similar to Applicants' definition of a pivoting axis defined by joints 9 - 9 and 10 - 10, in Fig. 3 of the present application, the Examiner argues.

This implied construction of Wiegand by the Examiner is incomprehensible and therefore seems to be utterly false. As a matter of fact, the Examiner indicates in paragraph (10) of his Answer, "*Wiegand's carriages contain rotating joints 60a, 60b and 60c as noted by appellants to*

*which the arms legs and bars are connected. These rotating joints do not add a degree of freedom to the movement of the carriages as argued by appellants but increase movement of their respective legs and bars.*" The Applicants have never argued such with respect to Wiegand's Fig. 11, and the Examiner's quoted statement is completely false. What Wiegand teaches is that rotating parts 60a, 60b and 60c add three further degrees of freedom to the platform (and not to the carriages). Although Fig. 11 is not clearly described, Wiegang clearly states (col. 6. line 19), "*Each rotating table can be rotated in respect to the corresponding carriage about an axis perpendicular to the carriage, wherein the rotational movements are controlled by control 8.*"

In any case, since elements 60a, 60b and 60c denoted on Fig. 11 of Wiegand are not described, it is difficult to understand the functioning of the embodiment represented by Fig. 11 of Wiegand. Only in case of a programmed control of the rotating tables 60a, 60b, 60c, is Wiegand's statement (col. 6, line 25) "*platform 1 can be moved in respect to base 2 in six degrees of freedom*" understandable. When carriage 6a is displaced, alone, the result should be the same as if the same displacement is applied to Fig. 10. The platform displaces parallel to itself; in other words, in translation only. If one wishes to impart a rotation to the platform 1 one must act on the rotating tables 60a, 60b, 60c, or at least on a part of them. These tables are designated on the Fig. 11 drawing, but are not described in the Wiegand specification. Wiegand does not provide any further explanation and it is not even suggested whether and how such displacement is possible. If all the axes defined by the pairs of lower joints between rotatable tables 60a, 60b, 60c and bars 4a , 4b, 4c, 4d or 4e, 4f are parallel to each other and perpendicular to the rails 7, then it seems that the device would function exactly as that of Fig. 10 of Wiegand: i.e., there is no rotation of the platform. Displacing the carriage 6a provides elevation or lowering of upper joints of bars 4a, 4b on the platform. This changes inclinations of bars 4c, 4d and 4e, 4f, and the platform displaces in

translation as explained with respect to Fig. 10. Now if the axes defined by pairs of lower joints between bars 4a, 4b, 4c, 4d, 4e, 4f, respectively, and the corresponding rotating tables 60a, 60b, 60c are not parallel, then the geometrical figures formed by respective bars 4a, 4b or 4c, 4d or 4e, 4f and the lines connecting the pairs of lower and upper joints of these bars are not parallelograms. They are articulated systems in a warped state. Displacement of carriage 6a provides parasitic forces. Pivoting of the platform 1 is only possible on a limited extent. Rotating tables 60a, 60b, 60c are actually additional elements that add further degrees of freedom to the device, but they need to be driven according to a definite program.

In summary, Wiegand's carriage 6a of Fig. 11 cannot impart a pivoting movement to platform 1 about an axis having a direction y (perpendicular to rails 7) when displacing alone on rails 7a. It seems this would be possible if rotating tables of the other carriages would be simultaneously and conveniently driven. In such a case, however, the Examiner's anticipation argument based on Wiegand fails.

#### The Examiner's Error B

Even if the Examiner's foregoing statements concerning Wiegand's Fig. 11 are deemed to be correct, which they are not, Wiegand's Fig. 11 would not anticipate claim 18 of the present application. The limitations of claim 18 must be considered in their entirety. Limitations positively recited in claim 18 cannot be detected in Wiegand's embodiment shown in Fig 11.

Claim 18 of the present application recites (line 4) "*a support and drive structure ... comprising at least two carriages*" and (line 8) "*an auxiliary structure... comprising*" (line 10) "*an auxiliary carriage.*" The support and drive structure with at least two carriages is thus recited distinctly and separately from the auxiliary structure with its auxiliary carriage (12). According to the Examiner's construction on Wiegand's Fig. 11, carriage 6a simultaneously belongs to the

support and drive structure and to the auxiliary structure. Claim 18 of the present application does not state this. In addition, claim 18 of the present application precisely states connections between carriages and other parts of the structures, these connections differing when belonging to the support and drive structure or to the auxiliary structure (12). According to claim 18 of the present application, the auxiliary structure comprises an auxiliary rigid pivot bar (14) and a transmission joint (15). Each one of these parts is unique. The unique transmission joint (15) and the unique auxiliary rigid pivot bar (14) represent the gist or heart of the invention. These parts exist and are shown in all the embodiments of the present invention. This arrangement permits the imparting of a pivoting movement to the terminal element about an axis parallel to y for each position of the terminal element within the workspace.

When looking at Wiegand's Fig 11, the Examiner does not seem to be aware of these facts. With bar 4a and his upper joint between that bar and platform 1, Wiegand clearly shows bar 4b and its upper joint to platform 1. This is a fact. Claim 18 of the present application states a complete and operational structure not enclosing this arrangement. A "rigid pivot bar" is not the same as "a pair of bars."

In addition thereto, claim 18 of the present application claims a "transmission structure" that transmits a pivoting transmission force through the unique transmission joint (15) directly from the base (1) of the device up to the terminal element (21). Wiegand clearly does not disclose such a teaching.

With a view to the above considerations, Wiegand's Fig. 11 does not anticipate in any manner the device of claim 18 of the present invention.

Respectfully submitted,

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**TRANSMITTAL OF REPLY BRIEF – 37 C.F.R. §41.41**

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Sir:

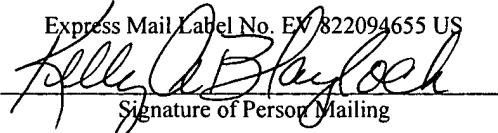
1. Transmitted herewith is the REPLY BRIEF in this application, associated with the Notice of Appeal filed on June 3, 2008.

2. STATUS OF APPLICANT

This application is on behalf of a small entity.

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\_\_\_\_\_  
Signature of Person Mailing

Kelly Blaylock

Printed Name of Person Mailing

December 29, 2008

Date

3. FEE FOR FILING REPLY BRIEF

None

4. EXTENSION OF TERM

None.

5. TOTAL FEE DUE

None.

6. FEE PAYMENT

None.

7. FEE DEFICIENCY

If any fee is required, please charge the fee to Deposit Account No. 12-2424.

Respectfully submitted,

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